

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. Highlighted questions are supplemental to the standard SEPA checklist. These questions look at the proposed project in relationship to the surrounding landscape. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the attached forest practice application acres, or the actual timber sale acres.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: **Small Deal Timber Sale** Agreement #: **30-075010**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:

Northwest Region **Contact Person: Candace Johnson**
919 North Township Street **Telephone: (360) 856-3500**
Sedro-Woolley, WA 98284

4. Date checklist prepared: **September 26, 2003**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

- a. Auction Date: **May 24, 2004**
b. Planned contract end date (but may be extended): **September 30, 2005**
c. Phasing: **Does not apply.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Timber Sale

- a. Site preparation: **Logging slash from landings generated on this proposal will be piled and potentially burned, allowing adequate planting spots.**
b. Regeneration Method: **Hand plant Douglas fir and western red cedar at 360 stems/acre, tentatively scheduled for February 1, 2006.**
c. Vegetation Management: **To be surveyed 3-5 years following planting to assess need for hand cutting or chemical treatment.**
d. Thinning: **To be assessed 12-15 years following planting to verify need for PCT.**

Roads: Roads remaining active will access both State and private lands for future land management activities and will have routine annual maintenance, which may include ditch and culvert cleanout and road grading as needed. Existing roads along the haul route will follow the approved RMAP for the Van Zandt Dike.

Rock Pits and/or Sale: Existing Phyllite pit or stockpile will continue to be used for any necessary road maintenance or future timber sales.

Other: Firewood cutting may be permitted following harvest.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒303(d) – listed water body in WAU: **South Fork Nooksack River** ☒ temp. ☐ Sediment ☐ completed TMDL (total maximum daily load): see <http://www.ecv.wa.gov/programs/wq/wqhome.html> , report also available at the Northwest region office.

☐Landscape plan:

☒Watershed analysis: **Final Acme Watershed Analysis dated February 2000, available at the Northwest region office.**

☐Interdisciplinary team (ID Team) report:

☒Road design plan: **available at the Northwest region office.**

☐Wildlife report:

☐Geotechnical report:

☐Other specialist report(s):

☐Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):

☐Rock pit plan:

☒Other: **Forest Resource Plan and Environmental Impact Statement, dated July 1992; Final Habitat Conservation Plan and Environmental Impact Statement, dated September 1997; State Soil Survey, dated 1992; available at the Northwest region office.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **None.**

10. List any government approvals or permits that will be needed for your proposal, if known.

☐HPA ☐Burning permit ☐Shoreline permit ☐Incidental take permit ☒FPA # _____ ☐Other:

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

The proposal area considered for this activity is on approximately 30 acres, located in section 33 of Township 38 North Range 05 East, approximately 4 miles southeast of Deming, WA. The proposal is surrounded by DNR ownership with large industrial ownerships and small private ownerships in the area.

The net harvest area of 28.9 acres was determined using GPS. The difference in gross proposal area vs. net harvest area is due to changes made to the boundary location during sale layout in addition to areas excluded for leave trees and existing roads. Leave trees have been established within the sale boundaries to protect several large, structurally unique wildlife trees. Slopes in the timber sale area range from 5-50%.

Net harvest area: 28.9 acres
Estimated volume: 1,264 MBF
Type of harvest: Regeneration harvest
Logging System: Ground-based, cable harvesting systems

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

The proposed sale is comprised of a single regeneration harvest unit totaling 28.9 acres. This unit will be harvested using cable-yarding systems on slopes greater than 25% and ground-based harvest yarding systems on slopes less than 25%. The proposed harvest area is located on a mostly western aspect. It consists of a stand of natural second growth timber, primarily Douglas fir and western hemlock with minor components of western red cedar, red alder, and bigleaf maple with an origin date of approximately 1924. The average diameter of the Douglas fir in this stand is 19-26” dbh (diameter at breast height) with an average height of 140 feet. The average diameter of the western hemlock in this stand is 18-22” dbh with an average height of 120 feet. The stand has a volume of approximately 34 mbf/acre. Snags, cedar stumps, and down woody debris are components of this stand; these components will not be removed from the site. There is a sparse understory of western hemlock, western redcedar, vine maple, salmon berry, moss, fern and salal. This information is taken from the DNR Forest Resource Inventory System and onsite data collection during sale layout.

Objectives for the sale include generating revenue for the State Forest Board Transfer trust, maintaining the biological and structural diversity and productivity of the site, protecting water quality and fish & wildlife habitat, and minimizing the visual impact of the early seral forest growth stage. This sale will retain 235 green trees scattered throughout the timber sale area. Scattered green trees are windfirm and have unique characteristics that will serve as a diverse, multi-layer canopy in the future stand.

c. Road activity summary. See also attached forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		0	0	0
Reconstruction		0		0
Maintenance		N/A		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	0			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See attached timber sale map. See also color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under “SEPA Center.”)

a. Legal description: **Section 33 of Township 38 North, Range 05 East, W.M.**

- b. Distance and direction from nearest town (include road names):**From the town of Acme on Highway 9, travel 1.7 miles east on Mosquito Lake Road. Turn left on the DNR Van Zandt N-1000 mainline road (there is no gate, but there is a large wooden DNR sign) and travel 2.0 miles to a Y in the road and stay to the right, drive an additional .2 miles to the sale area.**
- c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under “ SEPA Center.”)

WAU Name	WAU Acres	Proposal Acres
Acme	24,243	28.9
Sub-basin 11	5,198	28.9

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov> under “SEPA Center” for a broader landscape perspective.)

The proposed timber sale is on the top and upper west-facing slopes of the Van Zandt Dike. Sale elevation varies from 1320 to 1520 feet. Large industrial landowners own the majority of private land within the Acme WAU. The table below refers to information taken from the State GIS database.

WAU Name	Total WAU Acres	DNR Forested Acres in WAU	Percent DNR Managed Forestland In WAU	DNR Managed Forestland > 25 Years Old*	Percent DNR Forestland > 25 Years Old	Private Managed Acres in WAU	Percent Private Managed Land	Proposal acres
Acme	24,266	6,296	26%	3,155	50%	17,970	74%	28.9

*DNR forested acreage that will be hydrologically mature following current proposal harvest.

Within the past 7 years in the Acme WAU, approximately 440 acres of land has been harvested from 9 even-aged regeneration sales on DNR managed land. These regeneration harvest sales include Waffle, 1500 Extension, Skeeter View, Dike Connector, Dike Quaker Blowdown, and portions of Barkstrip, Guava, Dike Molehill, and Dike Dolphin. There was also one thinning sale, Acme Thinning, located partly in this WAU. Approximately 165 acres of DNR land within 1 mile of the current proposal have been harvested within the past 4 years. This information was taken from past Forest Practices Applications. Environmental impacts due to harvest activities of past sales, have been mitigated on a site-by-site basis according to the guidelines set out in the Acme Watershed Analysis Prescriptions, Forest Practice (F.P.) Rules and Habitat Conservation Plan. Therefore, current and future management activities should not adversely contribute to cumulative environmental impacts. All the even-aged harvest areas have been replanted with Douglas fir and western red cedar seedlings. Private landowners have completed several regeneration harvests in the WAU in accordance with the Forest Practices guidelines in the past 7 years, totaling approximately 1,800 acres. Private landowners have used a rotation age of 40-50 years of age. Future activities on private land are unknown. This data is based on the information taken from the attached SEPA maps dated September 15, 2003, and additional information available from the State GIS database as of September 15, 2003.

There were 2 regeneration harvests reviewed by the Board of Natural Resources in January 2004; Loquat, 104 acres and Jackstraw 98.9 acres. There are 2 sold sales that have not begun harvesting, Bootjack, 79 acres, and Jack’s Boot, 77 acres, both located more than 2.5 miles from the current proposal. Van Zandt, 70 acres, located 1 mile from the current proposal; and Pitside Flats, 81 acres, located less than 4.5 miles from the current proposal have begun harvesting.

Environmental issues in this WAU have been identified in the Final Acme Watershed Analysis, February 2000, which has developed prescriptions to mitigate any potential environmental impacts. There are 2 listed 303(d) waterbodies within the WAU on the South Fork Nooksack River. This proposal is located below a tributary of the listed portion of the river; where no impact is expected. Environmental issues have been mitigated in the current proposal to assure this activity and future activities adjacent to this proposal will not contribute to an increased chance of environmental impact. Ground-based harvesting and hauling of forest products may be restricted to the dry season. The wildlife trees will serve to maintain diversity, reduce soil erosion, and provide current and recruit future wildlife habitat. A total of 235 leave trees have been retained to preserve structural diversity for wildlife habitat. The site will be replanted within 2 years of harvest with Douglas fir and western red cedar. The current activity complies with the final Habitat Conservation Plan (HCP), Implementation Agreement, Incidental Take Permits, Forest Resource Plan, and Acme WAU prescriptions.

Future activities within this WAU in fiscal year 2004 include road construction; silvicultural activities; and 1 uneven-aged harvest, Resurrection thinning, approximately 248 acres. These activities will continue to follow the Forest Practices Rules, Forest Resource Plan, Implementation Agreement, Incidental Take Permits, final Acme Watershed Analysis prescriptions, and the HCP. This will ensure that all aspects of the environment are adequately protected and preserved and serve to minimize the chance of adverse cumulative environmental impacts. These scheduled activities combined with the current and past proposals will maintain the structural diversity of the forest stands within the WAU by removing uniform mature timber stands approximately 60 years of age and replacing them with planted conifer stands interspersed with legacy and wildlife trees.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (check one):
- ☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:
- 1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).
The Acme WAU is defined by the South Fork Nooksack River Valley, the eastern slopes of Stewart Mt., and the western slopes of the Van Zandt Dike. It is comprised of forested slopes that drain into the lower part of the South Fork Nooksack River. The elevation ranges from 300 ft to over 3,000 ft. The climate is typical of the western slopes of the Cascade Range, with influences from Mt. Baker and the Fraser River Valley. The average yearly precipitation is 50-60 inches in the WAU with a 10-year 24-hour storm event of 3 inches. The forest vegetation zone is the West Cascade hemlock zone with the major timber type being Douglas fir with western red cedar and western hemlock as sub-species. A hardwood component of big leaf maple, red alder and cottonwood is present at lower elevations.
- 2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The proposal is located at 1,240-1,520 feet in elevation. The unit has virtually all the elements listed in the previous section. Information based on local knowledge, aerial photos, and field verification.

- b. What is the steepest slope on the site (approximate percent slope)? **Slopes range from a minimum of 5% to a maximum of 50%. The majority of the sale (approximately 23 of the 28.9 acres) has slopes less than 35%.**
- d. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
7507	V.GRAVELLY LOAM	5-30	15	INSIGNIFIC'T	LOW
4787	GRAVELLY LOAM	5-30	6	INSIGNIFIC'T	LOW
7506	V.COBBLY LOAM	30-60	4	MEDIUM	MEDIUM
8723	V.GRAVELLY LOAM	15-30	4	INSIGNIFIC'T	LOW

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
- 1) Surface indications: **There are several shallow slope failures on the steep hillside of the Van Zandt Dike along short stretches of existing active and abandoned roads. These areas are located more than a mile from the current proposal.**

2) Is there evidence of natural slope failures in the sub-basin(s)?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics: **Natural failures can be found in concave, convergent topography formed by large, ancient slope failures. Minor stream bank failures along inner gorges and small shallow-rapid slides have occurred in the sub-basin according to aerial photo evidence.**

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics: **Shallow failures have been located on old road grades more than 20 years old on steep sides of the Van Zandt Dike.**
Associated management activity: **Failures identified are from road construction and old railroad grades caused by inadequate drainage, and ground disturbance within yarding roads and corridors. This information was verified using aerial photos and inspected in the field.**

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☒No ☐Yes, describe similarities between the conditions and activities on these sites:

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal. **Ground-based harvesting may not be permitted from November 1 to March 31 to prevent compaction and rutting. Ground based yarding will occur only on slopes less than 25% and cable harvesting will occur on slopes greater than 25%. Any rock haul, and hauling of forest products may be restricted to the dry season. This proposal is consistent with guidelines in the Forest Practices Rules, Acme Watershed Analysis prescriptions and the DNR's HCP.**
- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **0** Approx. acreage new landings: **0.5** Approx. acreage rock pit fills: **N/A**
Fill source: **To be established**
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **Erosion could result from landing construction during periods of heavy rainfall or as a result of yarding during periods of saturation. Additionally, erosion could result if ditches and culverts are not properly installed and maintained during and after the harvest operation. Erosion could also occur if stream banks are damaged. Road use during unfavourable weather conditions may contribute to an increased potential for surface erosion.**
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? Approximate percent of proposal in permanent road running surface (includes gravel roads): **NONE.**
- h. Propose measures to reduce or control erosion, or other impacts to the earth, if any: (Include protection measures for minimizing compaction or rutting) **All ditches will be excavated along roads to collect surface runoff which will be discharged onto stable areas of the forest floor or natural drainages through ditch outs and cross drain culverts. The combination of harvesting schedule and recommended yarding strategies will alleviate or minimize erosion. Down woody debris and stumps will not be removed thus impeding the flow of surface water. Cable yarding must have lead end suspension minimizing impacts to the ground in yarding corridors. Ground-based yarding, mechanized falling, road construction, and hauling of forest products may be restricted from November 1 to March 31. Contract and road maintenance contract provisions ensure that all operations will cease during periods of unfavourable weather during any time of the year. Harvested area will be reforested with Douglas fir and western red cedar seedlings at 360 trees per acre within two years of the expiration of the contract.**

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. **No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by truck traffic.**
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **None.**
- c. Proposed measures to reduce or control emissions or other impacts to air, if any: **None.**

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See attached timber sale map and forest practice base maps.)
- a) Downstream water bodies: South Fork Nooksack River.
- b) Complete the following riparian & wetland management zone table:
- | Wetland, Stream, Lake, Pond, or Saltwater Name (if any) | Water Type | Number (how many?) | Avg RMZ/WMZ Width in Feet (per side for streams) |
|---|------------|--------------------|--|
| Unnamed stream | 4 | 1 | N/A |
| Unnamed stream | 5 | 1 | N/A |
- c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
A single type 5 stream flows west through the middle of the unit; this stream has a 30-foot equipment limitation applied to it. Approximately 400 feet downstream of the unit it is joined by another type 5 and becomes a type 4. The type 4 stream is located approximately 400 feet outside the western boundary and does not require a buffer.
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐No ☒Yes (See RMZ/WMZ table above and attached timber sale map.)
Description (include culverts): There will be a 30-foot equipment limitation zone applied to the type 5 water within the timber sale harvest boundary. Roads along the haul route pass through existing RMZ's and WMZ's. Maintenance of these roads is the only scheduled activity.
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. No material will be placed in or dredged from surface waters or wetlands during the course of this proposal.
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒No ☐Yes, description:
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒No ☐Yes, describe location:
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒No ☐Yes, type and volume: A clause in the contract prohibits operators from discharging materials into surface waters.
- 7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes, there are steep slopes and incised channels in the Acme WAU and sub-basin 11 that may be susceptible to surface erosion. Information was obtained from recent region soils specialist reports for other sales in the vicinity, the state GIS SEPA Evaluation Report dated August 1, 2003, and aerial photos.

High Erosion Potential: WAU: 23%, Sub-basin 11: 12%
High Mass Wasting Potential: WAU: 23%, Sub-basin 11: 12%
- 8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐No ☒Yes, describe changes and possible causes: There is evidence from state GIS data and aerial photos that show minor changes to the channels of some streams within the WAU, likely due to mass wasting during large storm and stream flow events.
- 9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain: There should be little effect to stream water quality. All streams except for a single type 5 stream are located outside of the timber sale area. Hauling, and harvesting operations may be restricted from November 1 to March 31 and are not permitted during unfavourable weather conditions at any time of the year, minimizing impact from this proposal to water quality.
- 10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
As of August 1, 2003; Acme WAU: 3.9 mi/mi²
Sub-basin 11: 4.2 mi/mi²
Sub-basin 12: 5.1 mi/mi²
The percentage of roads carrying water is unknown. This information is from the state GIS data layer.
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒No ☐Yes, describe:
- 11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, STOP HERE and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☒No ☐Yes, approximate percent of WAU in significant ROS zone.
Approximate percent of sub-basin(s):

- 11) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?
- 13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐No ☒Yes, describe observations: **Shallow rapid failures and stream bank erosion have occurred in the WAU and sub-basins during peak flow events. Stream channels draining from the sale vicinity do not show evidence of such effects.**
- 14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact. **The Acme Watershed Analysis has assessed rain-on-snow and peak flow and shows that the proposal area is not susceptible to rain-on-snow events. Therefore, activities from this proposal are not expected to add greatly to peak flow.**
- 15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒No ☐Yes, possible impacts:
- 16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts. **The potential for streamflow increases are tempered by design of the proposed sale and yarding strategies. Harvesting operations will be restricted during unfavourable weather conditions further reducing the impact to water quality. Also see B.1.h.**

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known. **None anticipated.**
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. **Insignificant amounts of oil and other lubricants could be inadvertently spilled as a result of heavy equipment use. No lubricants will be disposed of on site.**
- 3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒No ☐Yes, describe:
- a) Note protection measures, if any. **See 3.a.16 above.**

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **Intercepted surface storm water from rain and snow melt and intercepted ground water from existing road cut banks will be collected into roadside ditches and discharged onto stable areas of the forest floor, or into natural drainage areas through cross drain culverts and ditches. All discharged water associated with this proposal is tributary to the South Fork Nooksack River via streams and other typed waters.**
- 2) Could waste materials enter ground or surface waters? If so, generally describe. **Erosion and mass wasting are unlikely, provided appropriate forest practices are used during road construction and timber harvesting near typed waters.**
- a) Note protection measures, if any. **There will be a 30-foot equipment limitation zone applied to the type 5 water within the timber sale boundaries.**

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any: **Maintenance of crowned and rock surfacing on all roads will reduce sediment from entering natural waters. Catch basins and rock head walls at culvert inlets will be maintained according to Forest Practice requirements. See surface water, ground water, and water runoff sections, questions B-3-a-1-c, B-3-a-2, B-3-a-16, and B-3-c-2-a.**

4. Plants

a. Check or circle types of vegetation found on the site:

- ☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒cottonwood, ☐western larch, ☐birch, ☐other:
☒evergreen tree: ☒Douglas fir, ☐grand fir, ☐Pacific silver fir, ☐ponderosa pine, ☐lodgepole pine,
☒western hemlock, ☐mountain hemlock, ☐Englemann spruce, ☐Sitka spruce,
☒red cedar, ☐yellow cedar, ☐other:
☒shrubs: ☒huckleberry, ☒salmonberry, ☒salal, ☒other: Oregon grape, sword fern
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☒devil's club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: mosses
☐plant communities of concern:

- b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.) **Timber approximately 79 years old will be removed from 28.9 acres with clumped and scattered retention trees throughout the units. Understory vegetation within the sale area will be disturbed during timber falling and yarding activities.**

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under “SEPA Center.”)

The timber sale area consists of 1 unit surrounded by DNR and private ownership. The attached SEPA maps dated 10/06/ 2003 show activities in the adjacent stands over the past several years. The unit is bounded to the east by a 20 acre, 30 year old stand; to the North there is a 45 acre, 5 year old stand; to the south is a 162 acre, 18 year old stand; and to the west is a 19 acre 5 year old stand.

- 2) Retention tree plan: Objectives of the green tree retention plan include: creating structural diversity, maintaining down woody debris attributes, preserving and providing microhabitats that are spatially unique, and minimize the visual impact of the early seral stage. These objectives will be achieved while complying with the requirements of the Forest Resource Plan and HCP.

A minimum of 8 trees/acre with diameters greater than 12 inches are scattered throughout the sale area totaling 235 trees. Scattered windfirm trees from diameter classes between 18-32 inches DBH were retained. Scattered trees include those that show structural characteristics that are important to wildlife, such as broken tops, large limbs, forks & crooks; primarily from dominant and co-dominant crown classes. All other snags, all western red cedar stumps, and down woody material is to be left; however, some snags may need to be felled due to L&I requirements. At least 2 downed logs greater than 12 inches at the small end will be present upon the completion of the contract.

- c. List threatened or endangered plant species known to be on or near the site. **DNR’s TRAX system indicates no known threatened or endangered plant species.**
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **Wildlife & green trees will contribute to natural regeneration. Douglas fir and western redcedar will be planted at 300-360 stems/acre within two years of timber harvest. See 4.b.2 above.**

5. Animal

- a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☐cliffs, ☐oak woodlands, ☐balds, ☐mineral springs

- b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species). **No threatened or endangered species are known to be on or near the site.**
- c. Is the site part of a migration route? If so, explain.
☒Pacific flyaway ☐Other migration route: Explain if any boxes checked: **All of Washington State is considered part of the Pacific flyway. No impacts are anticipated as a result of this proposal being completed.**
- D. Proposed measures to preserve or enhance wildlife, if any: **Wildlife trees (including damaged, defective, dying, and dead trees, all still standing) will serve as habitat for several bird and wildlife species. The purchaser will not remove the downed logs, stumps, or snags. A total of 235 green trees with diameters greater than 12-inch dbh, primarily from the 18-32" diameter classes, will be retained within the harvest area. Douglas fir and western red cedar will be planted within two years of the timber harvest.**

- 1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11. See above.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project’s energy needs? Describe whether it will be used for heating, manufacturing, etc. **Does not apply.**
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **Does not apply.**
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **Does not apply.**

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. **There is minimal hazard due to heavy equipment operations. There is a potential fire hazard if operating in moderate fire weather conditions during the summer.**
- 1) Describe special emergency services that might be required. **Does not apply.**
- 2) Proposed measures to reduce or control environmental health hazards, if any: **None.**
- b. Noise
- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **Noise from trucks and logging equipment will be present while operating during daylight hours.**
- 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site. **There will be noise during daylight hours on a short-term basis from heavy equipment, log trucks, and chain saws during road construction and logging.**

3) Proposed measures to reduce or control noise impacts, if any: **None.**

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.) **State owned commercial forestry land surrounds the proposal area.**
- b. Has the site been used for agriculture? If so, describe. **No.**
- c. Describe any structures on the site. **Does not apply.**
- d. Will any structures be demolished? If so, what? **Does not apply.**
- e. What is the current zoning classification of the site? **Does not apply.**
- f. What is the current comprehensive plan designation of the site? **Commercial forestry.**
- g. If applicable, what is the current shoreline master program designation of the site? **Commercial forestry.**
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify. **Does not apply.**
- i. Approximately how many people would reside or work in the completed project? **Does not apply.**
- j. Approximately how many people would the completed project displace? **Does not apply.**
- k. Proposed measures to avoid or reduce displacement impacts, if any: **Does not apply.**
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **The design of this project is consistent with current comprehensive plans and zoning regulations.**

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **Does not apply.**
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **Does not apply.**
- c. Proposed measures to reduce or control housing impacts, if any: **Does not apply.**

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed? **Does not apply.**
- b. What views in the immediate vicinity would be altered or obstructed? **Approximately 28.9 acres of timber approximately 79 years old will be regeneration harvested with scattered green trees retention.**
 - 1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐No ☒Yes, viewing location: **The communities of Acme and Van Zandt.**
 - 2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☐No ☒Yes, scenic corridor name: **The timber sale area will be visible for short periods while traveling along Highway 9.**
 - 3) How will this proposal affect any views described in 1) or 2) above? **Views in these areas are partially buffered by timber ranging from 5 years old to more than 60 years old. They will be impacted until the planted conifer stand becomes established.**
- c. Proposed measures to reduce or control aesthetic impacts, if any: **Use of scattered leave trees will provide structural and spatial diversity and will reduce aesthetic impacts. Replanting with Douglas fir and western red cedar seedlings at 360 stems/acre within two years of harvest will also serve to reduce any aesthetic impacts.**

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **Does not apply.**
- b. Could light or glare from the finished project be a safety hazard or interfere with views? **Does not apply.**
- c. What existing off-site sources of light or glare may affect your proposal? **Does not apply.**
- d. Proposed measures to reduce or control light and glare impacts, if any: **None.**

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? **Hunting, mushroom gathering berry picking and hiking.**
- b. Would the proposed project displace any existing recreational uses? If so, describe: **No.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **None.**

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe. **No.**
- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site. **None.**
- c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.) **Maps and a work schedule for the proposal area were sent to the Lummi Nation and the Nooksack tribe to allow them to assess the area for cultural significance. There has been no response from either tribe as of September 26, 2003.**

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. **The proposal area can be accessed via the DNR Van Zandt N-1000 mainline road off of Mosquito Lake County road.**
 - 1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)? **No.**
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **No.**
- c. How many parking spaces would the completed project have? How many would the project eliminate? **None.**
- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private). **NO.**
 - 1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all? **There will be increased truck traffic from timber hauling during the timber harvest period. An average of 10-15 round trip log truckloads may be moved each day during harvest operations.**
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **No.**
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. **None.**
- g. Proposed measures to reduce or control transportation impacts, if any: **Safe operation of vehicles and use of signs will be encouraged.**

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. **There will be an increased potential for forest fires for 3-5 yrs after harvest until logging debris breaks down and the unit is once again under vegetation.**
- b. Proposed measures to reduce or control direct impacts on public services, if any. **Restrict access during periods of extreme fire hazard. Operations will cease during periods of extremely low humidity (less than 30%).**

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other. **Does not apply.**
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **Does not apply.**

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____, Date: _____

Title

Reviewed by: _____, Date: _____

Title

Approved by: _____, Date: _____

Title